

# Leak Tester Poseidon LT - 100

## User - Manual

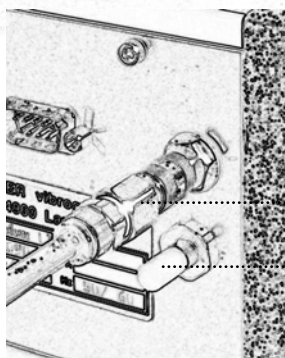
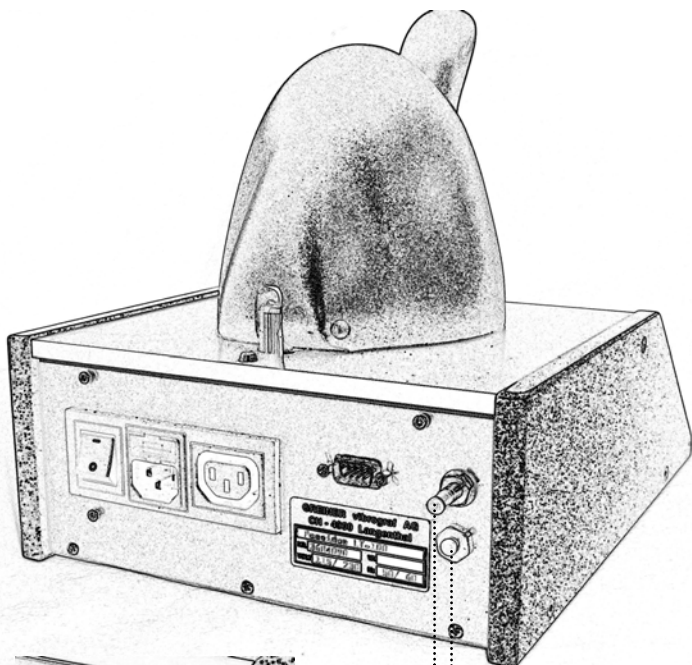
L



**Lindholts Furniturehandel ApS.**  
**Sportsvej 6**  
**DK - 8930 Randers NØ**

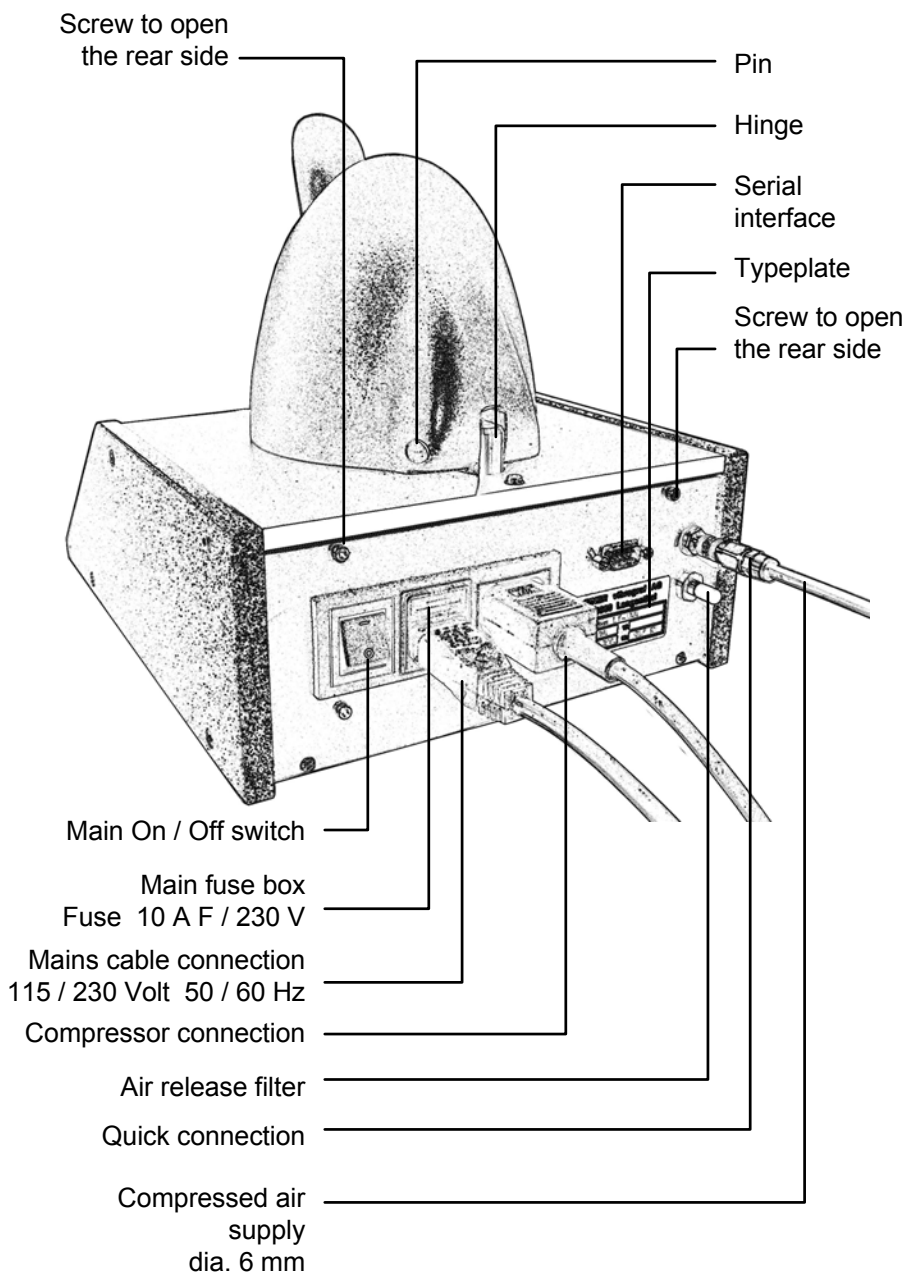
Tlf.: 86 42 52 99 - Fax: 86 41 37 45 - Mail: [lindholts@email.dk](mailto:lindholts@email.dk)

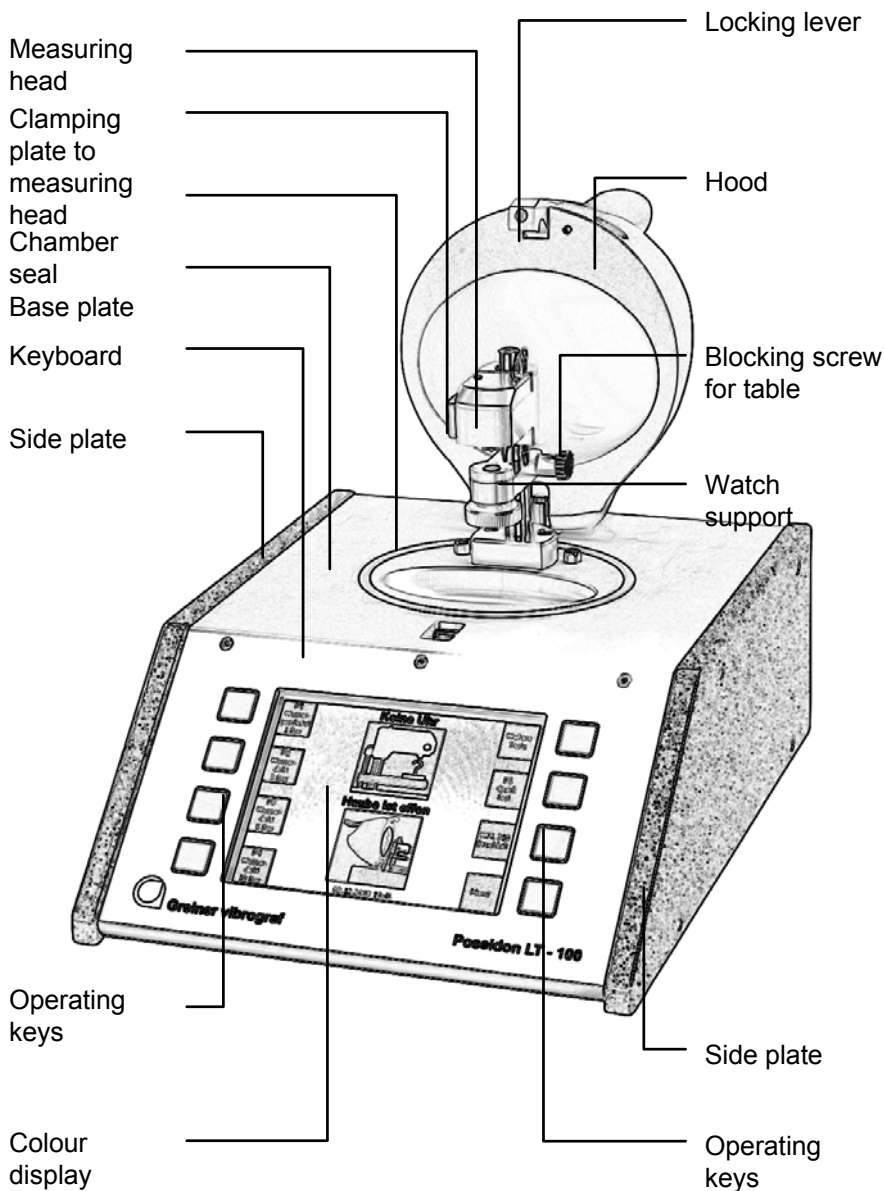
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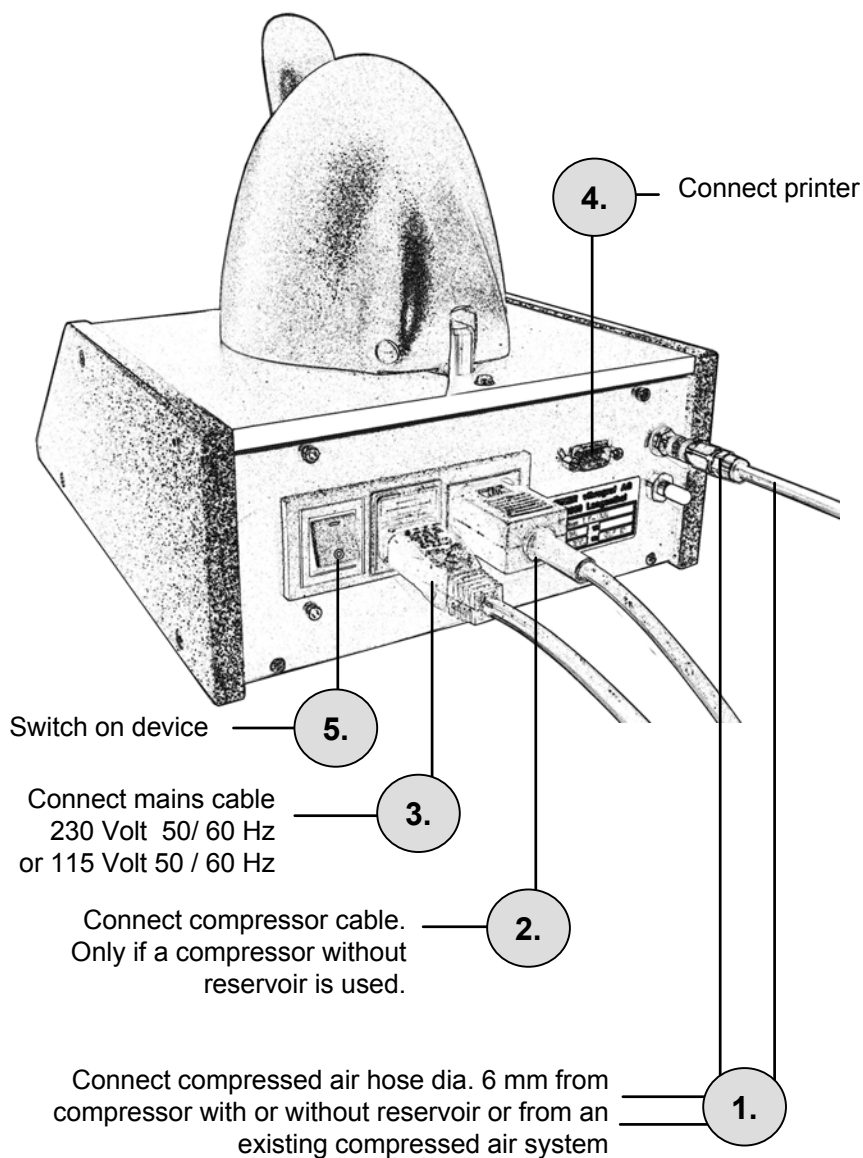


Remove protective plug and attach quick connection

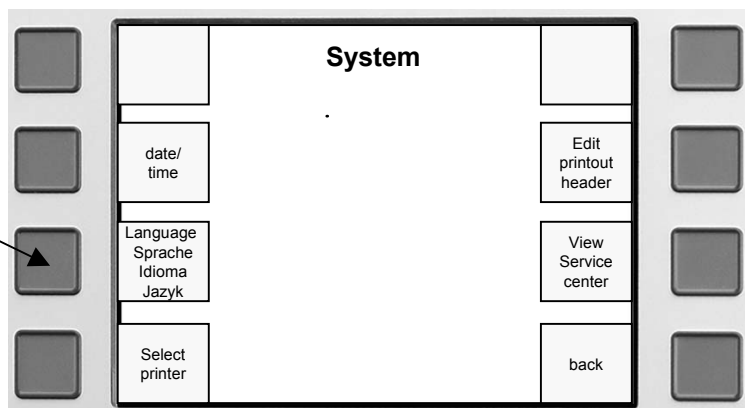
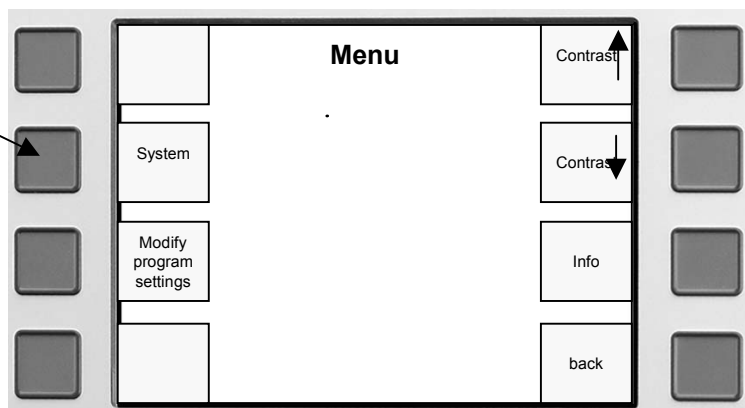
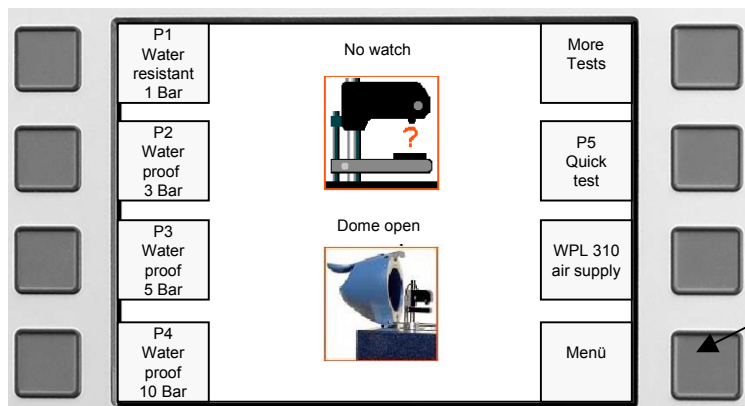
If there is a plastic protection, remove it and install the included air release filter. If there is a brass filter, leave it there.

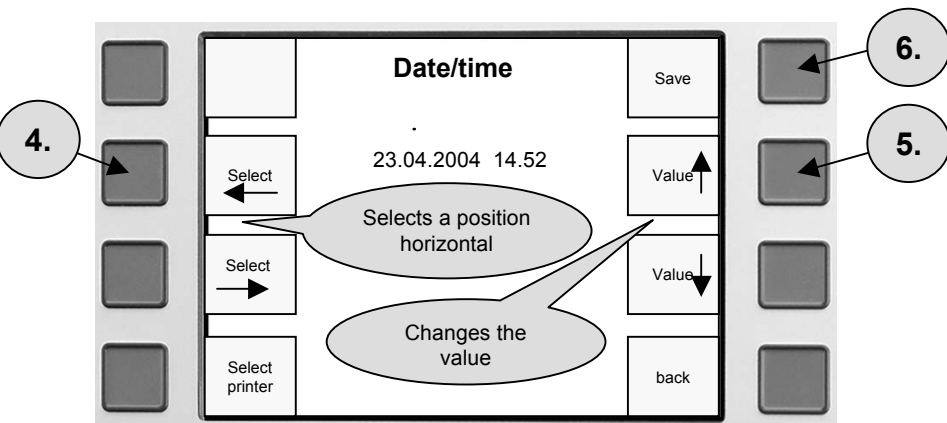
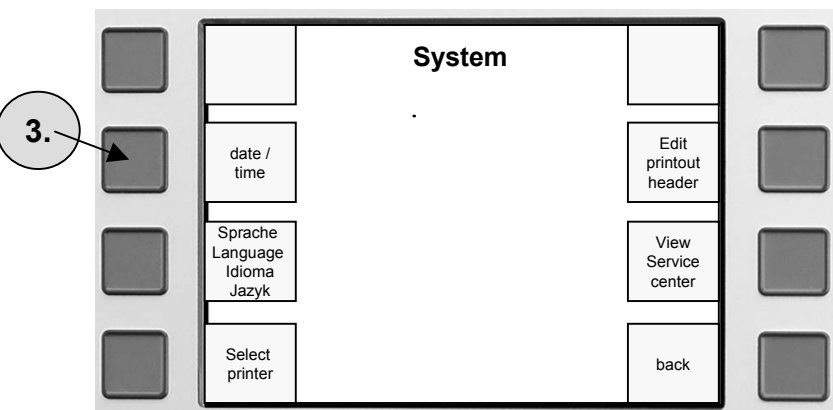
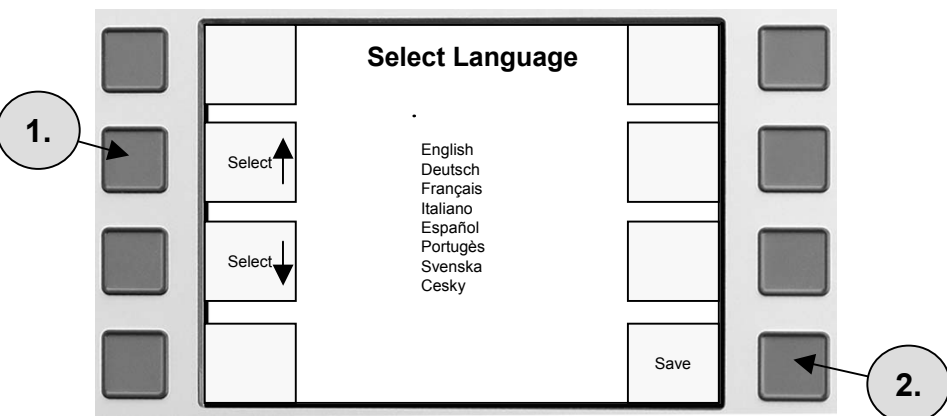






1. Press « Menue » , « System » , « Language »

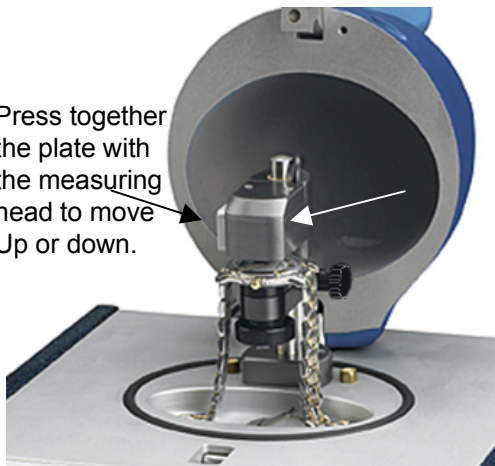






1. Lay the watch on the table rest as shown in the picture.
2. Move with the measuring head by pressing the measuring head downwards onto the watch.

Press together the plate with the measuring head to move Up or down.



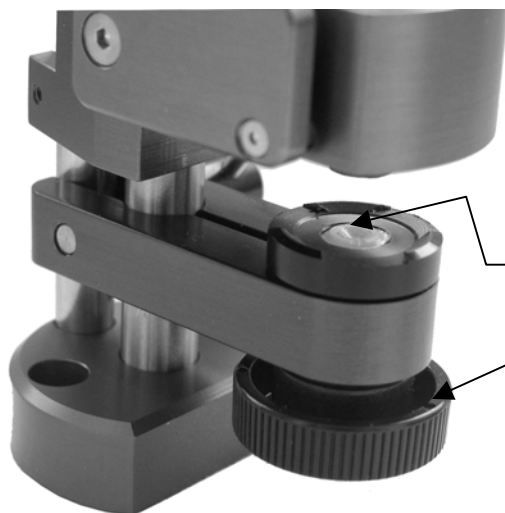
This indication will appear on the display



If one of these indications will Appear, read about it on Page 19

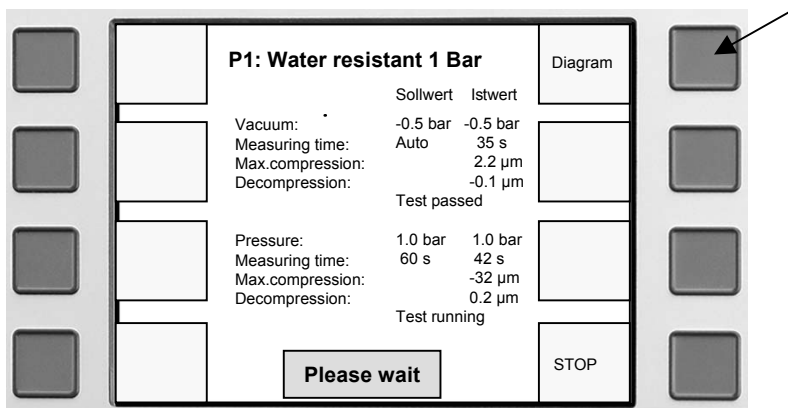
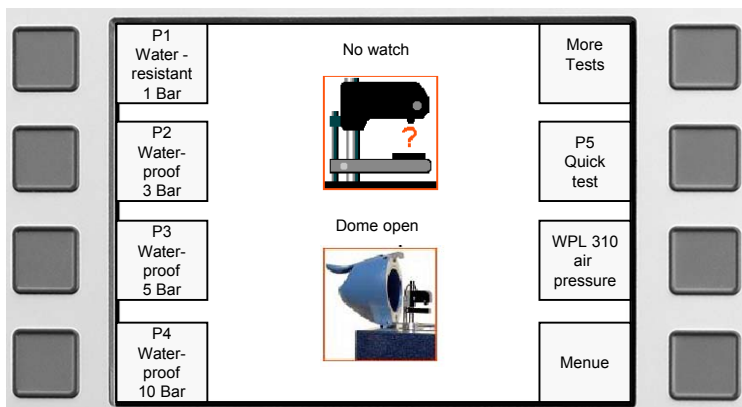
Information:

For small and very hard watches, used the small watch rest.



The small watch rest can be moved upwards by turning the screw to the stop in the clockwise direction.

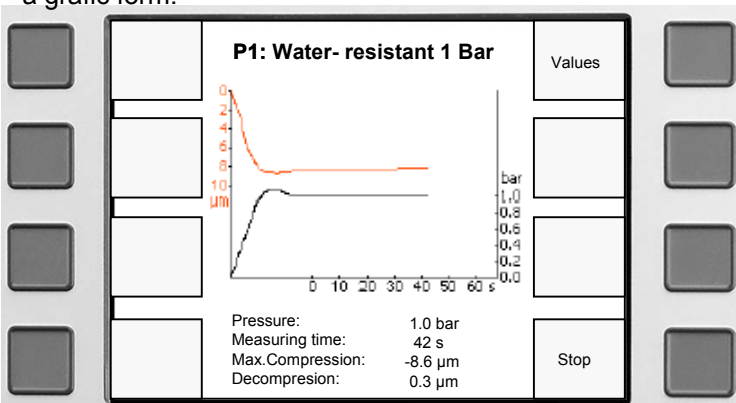
1. Select a test ( P1 , P2 , P3, P4 ), (Quick Test) or (more tests). See Pages 11, 12 , 13
2. Close the hood. The test will be started automatically.



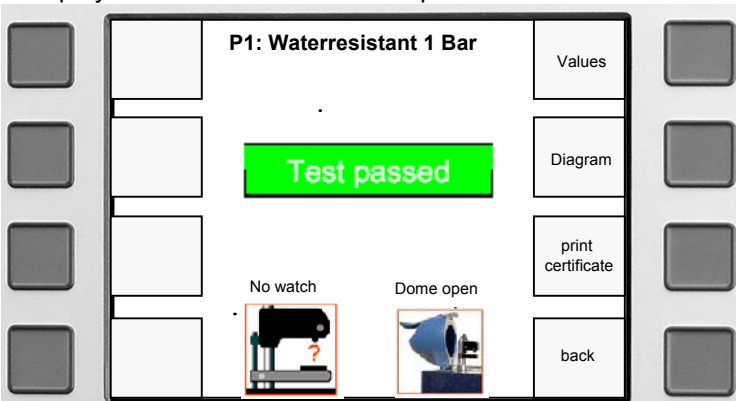
Press the Diagram key if you want to see the measured values graphically.

Display of the measured values in a graphic form.

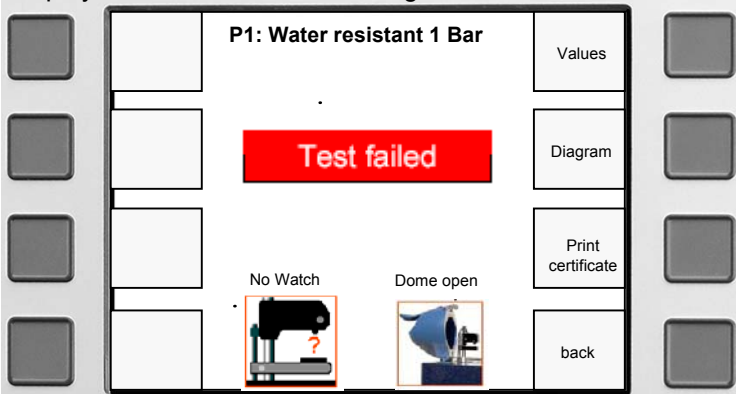
Example

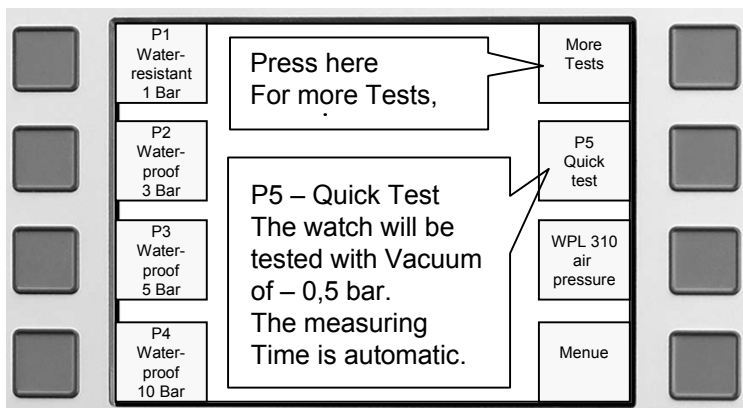


Display of the Result with a water proof watch.



Display of the Result with a leaking watch.





P1 = Vacuum - 0,5 bar / Pressure = 1,0 bar / Time = automatic.

P2 = Vacuum - 0,7 bar / Pressure = 3,0 bar / Time = automatic.

P3 = Vacuum - 0,7 bar / Pressure = 5,0 bar / Time = automatic.

P4 = Vacuum - 0,7 bar / Pressure = 10,0 bar / Time = automatic.

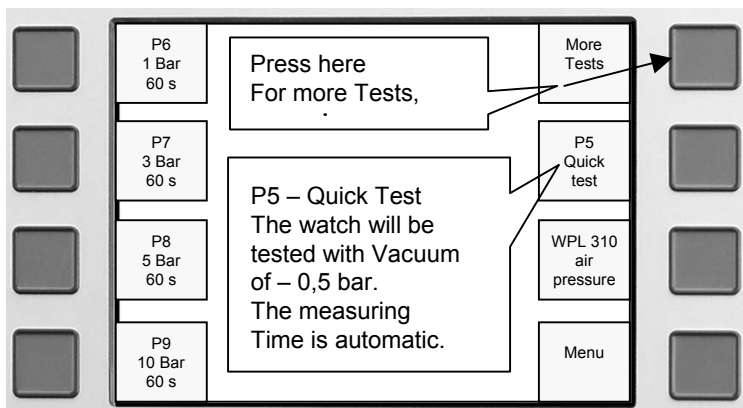
## Test Procedure for P1 – P4

The watch is first tested under vacuum. The required measuring time for a precise conclusion is programmed for automatic. It is determined automatically by the device through the behaviour of the watch during the measurement.

If the watch does not pass this test, the test under pressure will not be performed and the result is (Test 1 not passed).

If the watch has passed the test under vacuum, the result is (Test 1 passed). The test under pressure will then follow automatically. The test is started only after the housing of the watch has stabilised, which means when the housing has regained its original form.

The required measuring time for a precise conclusion is programmed for automatic. It is determined automatically by the device through the behaviour of the watch during measurement. If the watch does not pass this test, the result is (Test not passed). If the watch passes this test, the result is (Test passed).



P6 = Pressure = 1,0 bar / Measuring time = 60 seconds

P7 = Pressure = 3,0 bar / Measuring time = 60 seconds

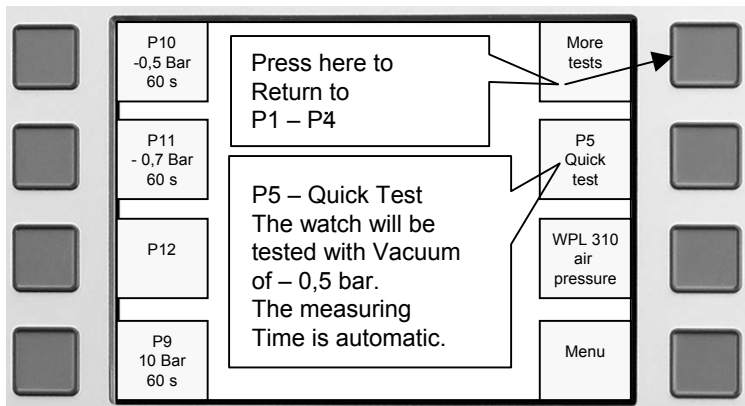
P8 = Pressure = 5,0 bar / Measuring time = 60 seconds

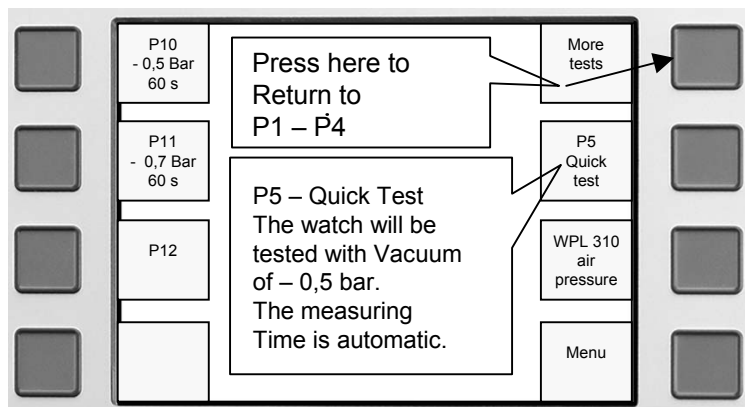
P9 = Pressure = 10,0 bar / Measuring time = 60 seconds

The test under pressure will then follow automatically. The test is started only after the housing of the watch has stabilised, which means when the housing has regained its original form.

The required measuring time for a precise conclusion is programmed for automatic. It is determined automatically by the device through the behaviour of the watch during measurement.

If the watch does not pass this test, the result is (Test not passed). If the watch passes this test, the result is (Test passed).





P10 = Vacuum – 0,5 bar / Measuring time = 60 seconds

P11 = Vacuum – 0,7 bar / Measuring time = 60 seconds

P12 = Not programmed

## Test Procedure for P10 + P11

The watch is tested with the vacuum displayed. The measuring time is programmed for 60 seconds. If the watch does not pass this test, the result is (Test not passed). If the watch passes this test, the result is (Test passed).

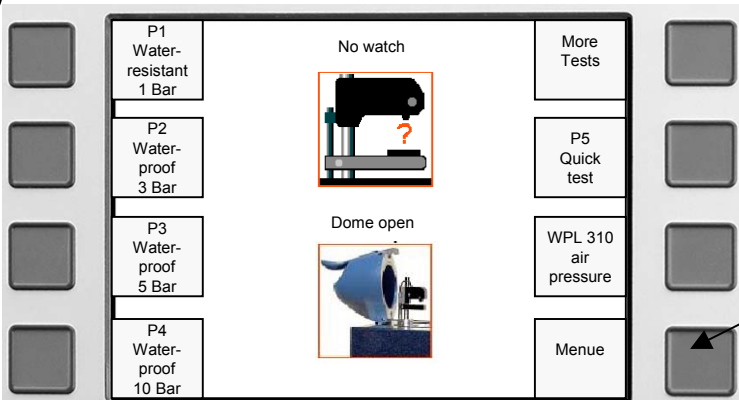
## Prepare Your Own Test Programs.

Read how you can prepare your own test program on Page 14 and how you can give your test program its own name on Page 15.

If you again want to install the test values pre-programmed by the factory, proceed as follows:

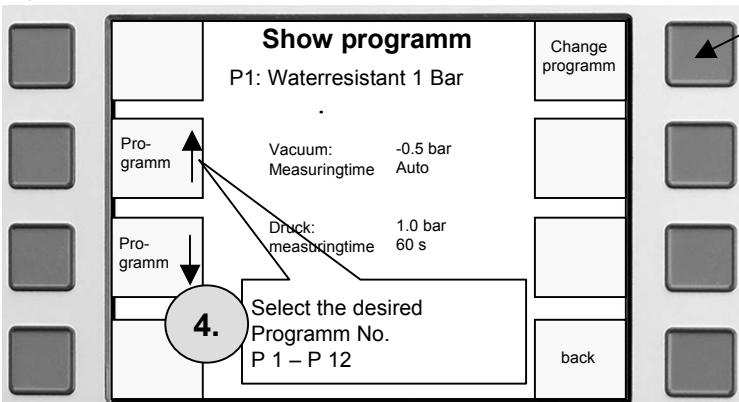
- Press **(Menu)**, then **(Change program)**
- Press **(Change program)** again
- Select the desired Programm.
- Now press **(Factory settings)** and **(Save)**.
- The original values are installed again.

1. Press « Menu »



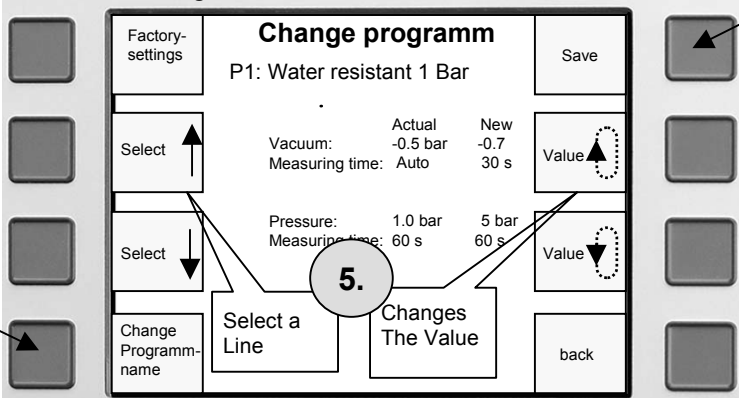
2. Press « System »

3. « change Programm »

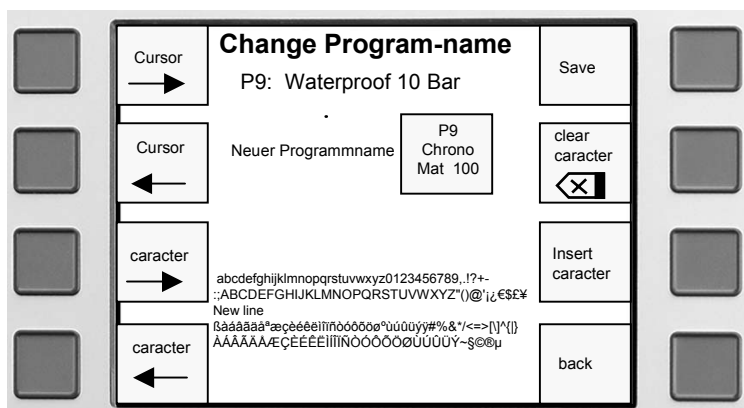


« Name of Programm »

« Save Programm »

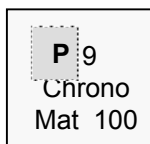


You can prepare your own test programs and provide these programs with their own names.



How to proceed:

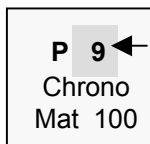
Use the « **Cursor** » to move to the desired position. Right or left.



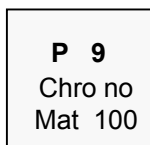
Use « **Character** »  
To move to the  
desired character.  
Right or left.

abcdefghijklmnopqrstuvwxyz0123456789.,!/?+-:;ABCDEFGHIJKLMNOPQRSTUVWXYZ"@\_!€\$£¥'." New line ßääääää\*æçèéëëïïñóóôôøø°úúüüÿ%#&\*/<=>[\^{} } ÄÅÄÅÄÅÆÇÈÉÊËÌÍÎÏÑÓÔÕÖØÙÚÛÜÝ~\$©®µ

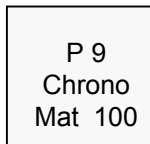
Use « **Delete character** » to delete the character to the left of the cursor. In this case, it is the **9**



Use « **Insert character** » to free 1 place to the left of the cursor for a character. In this case, it is to the left of **n**



Use « **Save** » to save the program name.





A record of the measurement can be printed out after every Measurement, if required. The record (Certificate) is structured as follows.

*****			}	Name of Instrument Testing programm (will be printed allways)
<b>POSEIDON LT-100</b> <b>P3: Water proof 5 Bar</b> *****				
Greiner vibrograf AG Weststrasse 69 CH-4900 Langenthal Tel. 0041 62 923 44 33 Fax: 0041 62 923 18 46 <a href="http://www.greiner vibrograf.com">www.greiner vibrograf.com</a>			}	Record head: contains Max. 6 lines Max. 42 caracters per line
25.04.2004	Nominal	Current	}	Test protocol (will be printed allways)
Vacuum:	-0.5 bar	-0.5 bar		
Measuring time:	Auto	35 s		
Max.compression:		2.2 µm		
Decompression:		-0.1 µm		
<b>Test 1 passed</b>				
Pressure:	3.0 bar	3.0 bar		
Measuring time:	60 s	60 s		
Max.compression:		-32 µm		
DFecompression:		0.1 µm		
<b>Test 2 passed</b>				

To input the text in the measurement record head, proceed in the same way as to change the program name. (See Page XX).

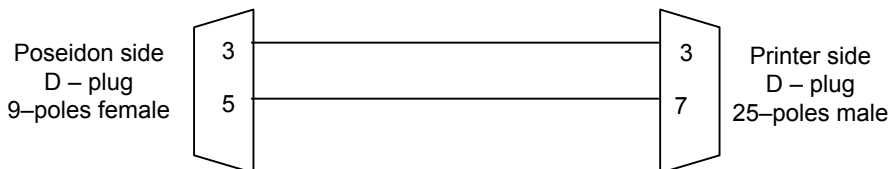
Edit record head		
Cursor →	Greiner vibrograf AG Weststrasse 69 CH-4900 Langenthal Tel. 0041 62 923 44 33 Fax. 0041 62 923 18 46 www.Greiner vibrograf.com	Save
Cursor ←		delete character ✕
character →	abcdefghijklmnopqrstuvwxyz0123456789.,!?+-; :ABCDEF GHIJ KLMNOPQRST UVVWXY Z"()@%€\$¥ New line	insert character
character ←	À Á Â Ã Ä Å Æ Ç È É Ê Ë Ì Í Î Ï Ñ Ò Ó Ô Õ Ö Ø Ù Ú Û Ü Ý Þ ß à á â ã	back

The link cable contains on one side a D-plug 9 pins ( female ) and on the other end a D-plug 25 pins ( male ).

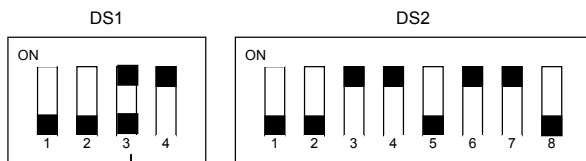
Link cable between Poseidon and Printer  
Typ: D-SUB 9/25  
DB9 female / DB25 male / 1.8m

RS-232, asynchron  
9600 Baud  
8 Datenbits  
keine Parität

Folgende Verbindungen müssen mindestens existieren:  
Following connections must exist as a minimum.



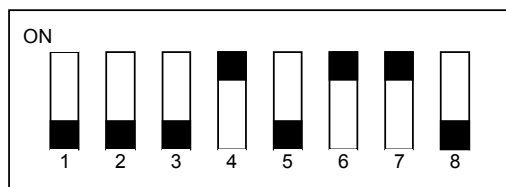
## Citizen idp 460



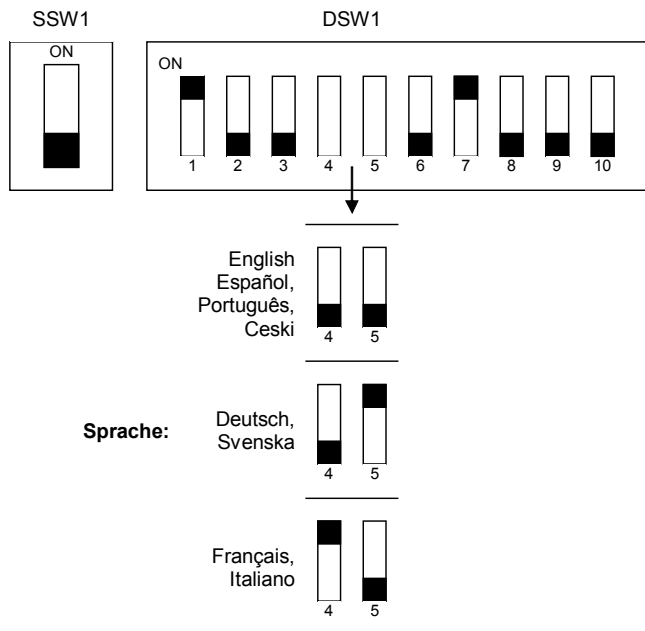
**If the Characters look like this,**

Change the position of the micro switch.  
Normally leave it in the position as delivered.

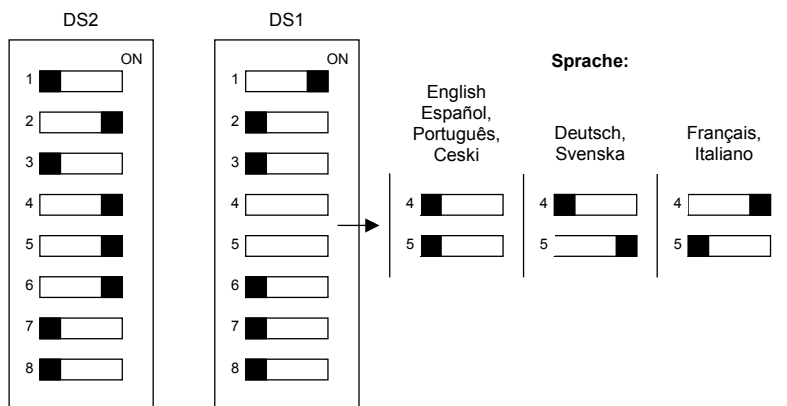
## Citizen CBM-910



# Citizen iDP-562



# Citizen iDP-3535



When lowering the measurement head onto the watch, press the plate together with the measuring head.

As a result, the setting ring moves downwards and limits the lowering of the measuring head onto the watch.

When the plate is released, the measuring head is blocked in the position and the setting ring goes upwards.

The sensor pin is now free on the watch. The green display lights up.

Green display is in the middle.



The sensor pin is in the correct range.

If one of the following pictures appears, you should correct the setting ring. First drive the measuring head upwards.

Yellow or red display is at the top.

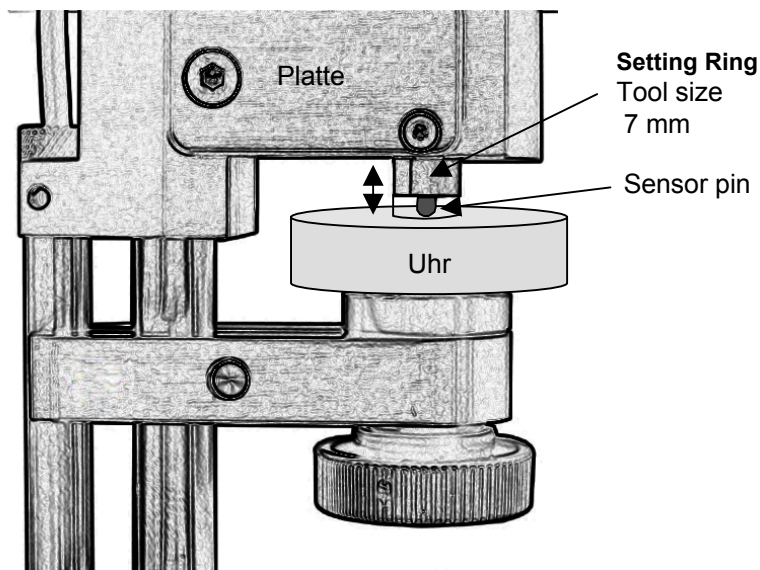


The sensor pin is too far downwards. Turn the setting ring downwards.

Yellow or red display is at the bottom.



The sensor pin is too far upwards. Turn the setting ring upwards.



## General

The deformation of the watch is measured continuously during a tightness test through the high precision mechanics, the high resolution state-of-the-art electronics and the intelligent software. This is done with an accuracy of less than 0.0001 mm.

## Tightness Test Under Vacuum.

A vacuum is established in the chamber up to -0.7 bar.

This means that the pressure in the sealed watch is greater than the ambient pressure. The watch expands outwards. This expansion (deformation) is measured continuously through the precise displacement sensor in the measuring head. The program, which is very extensive and is based on years of experience, will now decide independently

a) whether or not the watch was deformed sufficiently during the build-up of the vacuum.

b) the time after which the measurement can be ended.

(Only if the measurement time is programmed on automatic. )

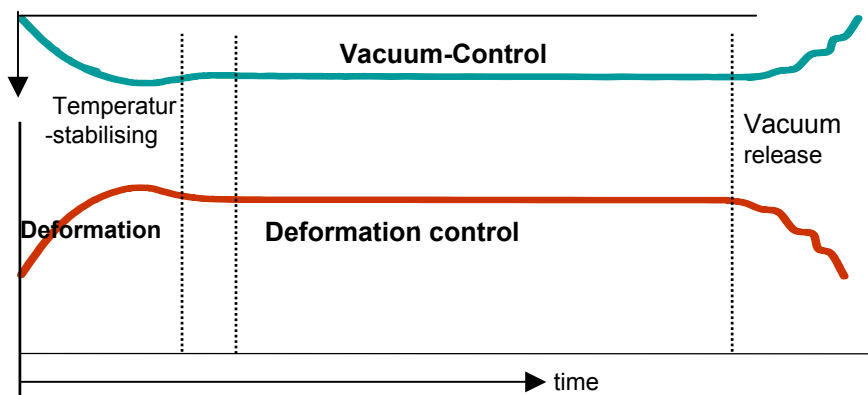
c) whether the watch can be classified as tight or not tight.

d) the vacuum is checked continuously during the measurement operation.

If the watch is found to be not tight during the vacuum test, the test with pressure will not be performed automatically.

If required, you can perform a new test under pressure.

## Vacuum set up



## General

The deformation of the watch is measured continuously during a tightness test through the high precision mechanics, the high resolution state-of-the-art electronics and the intelligent software. This is done with an accuracy of less than 0.0001 mm.

## Tightness Test Under Pressure.

Pressure is established in the chamber up to + 10 bar.

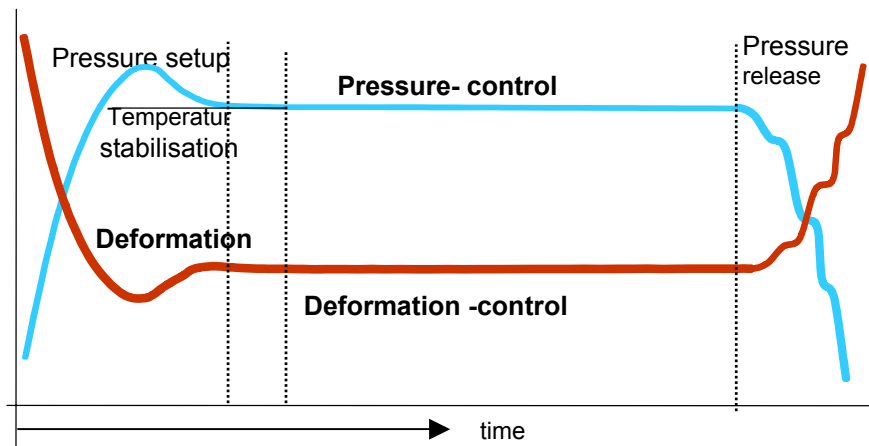
This means that the pressure in the sealed watch is less than the ambient pressure. The watch is pressed together. This (deformation) is now measured continuously through the precise displacement sensor in the measuring head. The program, which is very extensive and is based on years of experience, will now decide independently a) whether or not the watch was deformed sufficiently during the build-up of the pressure.

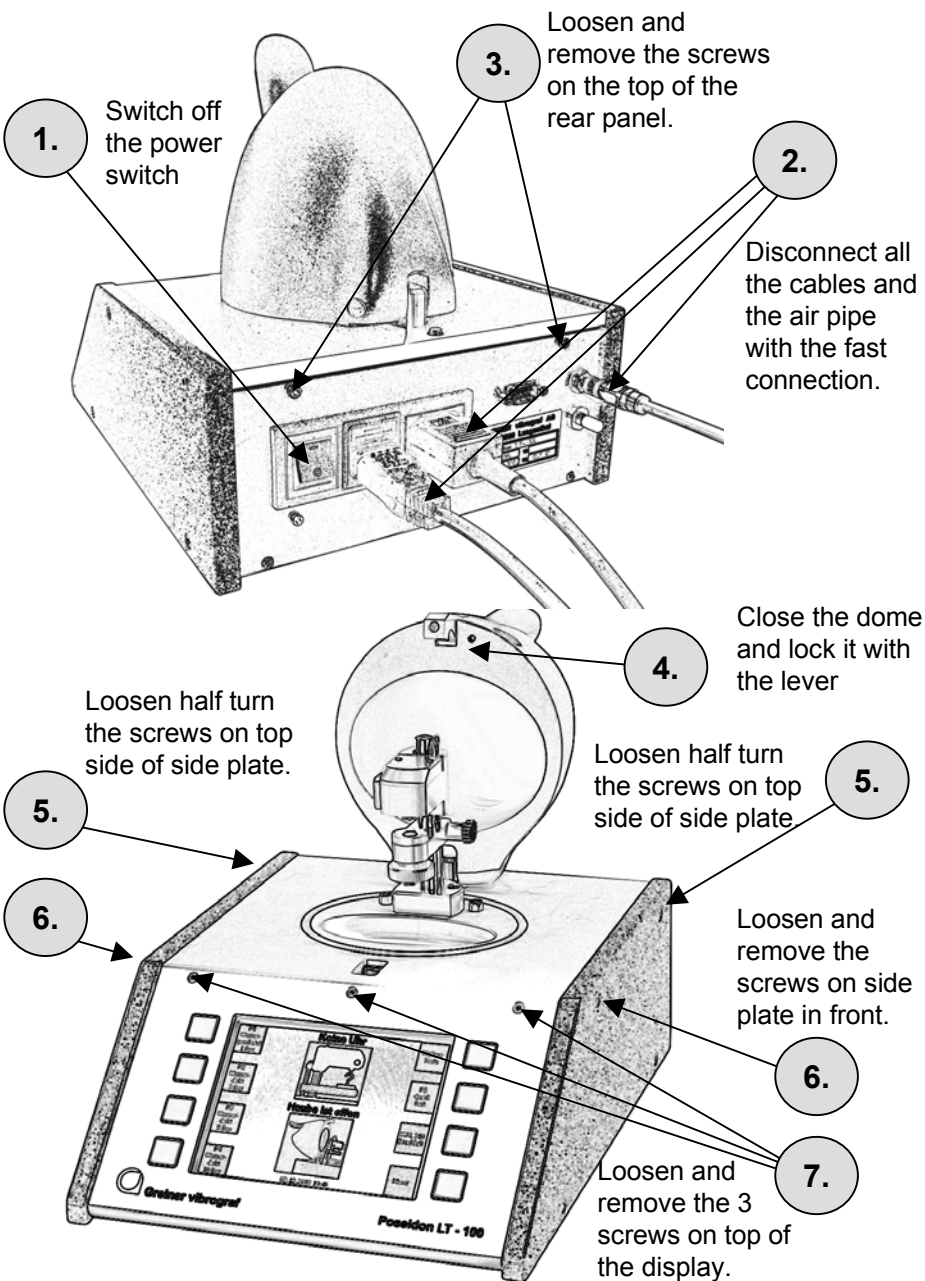
b) the time after which the measurement can be ended.

(Only if the measurement time is programmed on automatic. )

c) whether or not the watch can be classified as tight or not tight.

d) the chamber pressure is checked continuously during the measurement operation.

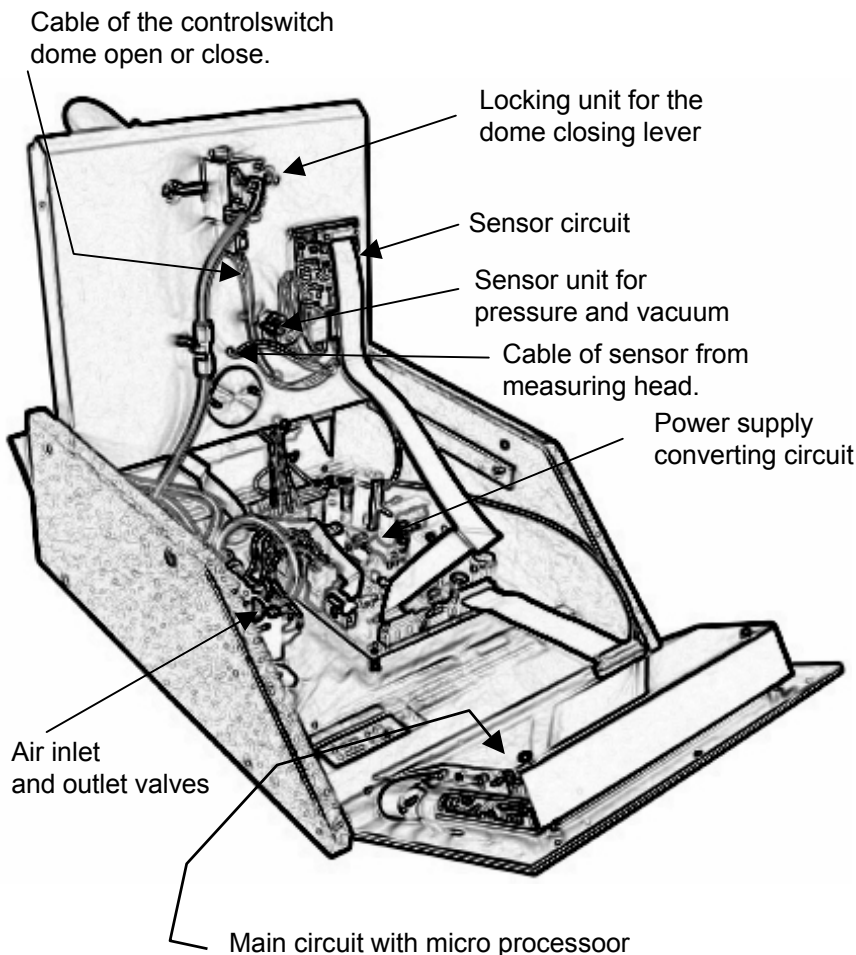




**Important:**

***Before you turn the main plate in a vertical position, Close the dome and lock it with the lever. Otherwise the backside of the dome will touch the rear plate of the instrument and it can remove a part of the painting.***

If the Poseidon is opened like this ,you have access of all moduls.





**Included in delivery:**

- 3 m of air pressure hose Ø 4 – 6 mm with fitting G 1 / 8 for compressor.
- Power connector for compressor
- User manual.

**Maintenance:**

For cleaning: use a cloth with a soft detergent.

**Don't use a sharp cleaning solution.**

From time to time, clean the sealing ring on the main plate and the surface beyond the dome.

If necessary clean the keyboard and the display.

**EG Conformity**

-The Poseidon corresponds with the following EG directives and rules.

89/392/EEG                      machinery

EN 292 – 1991

89/336/EEG                      EMV

EN 50082-2                      disturbing security Industry

EN 55011-1991                      disturbing emission

23/73/EEG                      Low voltage directives

EN 61010 – 1993                      Electrical security